



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,532	09/29/2003	Jong-Yoon Hwang	678-508 CON	1828
28249	7590	11/07/2005	EXAMINER	
DILWORTH & BARRESE, LLP 333 EARLE OVINGTON BLVD. UNIONDALE, NY 11553			DAGOSTA, STEPHEN M	
			ART UNIT	PAPER NUMBER
			2683	

DATE MAILED: 11/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/673,532	Applicant(s) HWANG ET AL.	
	Examiner Stephen M. D'Agosta	Art Unit 2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-22 and 25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4,8-22 and 25 is/are allowed.
- 6) ☒ Claim(s) 1,5 and 7 is/are rejected.
- 7) ☒ Claim(s) 2-3 and 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments filed 10-28-2005 have been fully considered but they are not persuasive.

1. The amendment overcomes the examiner's USC 112 rejection. After further consideration, the claims are now categorized as follows:

- a. Claims 4, 8-22 and 25 are allowed
- b. Claims 1, 5 and 7 are rejected
- c. Claims 2-3 and 6 are objected to as containing novel material.

2. The applicant argues that the prior art does not teach claim 1. The examiner disagrees since the applicant teaches a bit-to-bit compare whereas Chheda teaches a frame-to-frame compare (as pointed out in the office action). Hence one skilled understands that both comparisons will ultimately lead the system to the same conclusion, eg. whether to increase/decrease power.

3. With regard to claim 7, the examiner notes that this claim is written broadly and is therefore contained within the scope of claims 22/23 (and therefore rejected):

a. Claim 7 recites:

"transmitting PCB's for power control decrease if a channel state signal of "sufficient" is received from the terminal; and  
a second step of transmitting PCB's for power control increase if a channel state signal of "insufficient" is received from the terminal".

b. Claims 22/23 parallels claim 7 in that they recite:

22. An apparatus for controlling forward link transmission power according to a power control command included in data received while in a discontinuous transmission mode, the apparatus comprising; a power control command demodulator for extracting the power control command from the received data to provide the power control command; a controller for combining demodulated information and information representing whether a previous frame has been transmitted, for generating and outputting power control bits for performing a power decrease only when the two information coincide; and a forward transmitter transmitting data and power control bits under control of the controller.

23. The apparatus as claimed in claim 22, wherein, if the power control command comprises one bit representing two receiving states of "sufficient" and "insufficient" the power control bits for performing power decrease are generated if the power control command represents the "sufficient" state, while the power control bits for performing power increase are generated if the power control command represents the "insufficient" state.

As seen, both recite the same inventive concept of increasing/decreasing power depending upon an insufficient/sufficient state.

Art Unit: 2683

4. The applicant is invited to amend the claims as recommended by the examiner which should provide a more favorable outcome.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1, 5 and 7** rejected under 35 U.S.C. 102(e) as being anticipated by Chheda et al. US Patent 6,181,738 (hereafter Chheda).

As per **claim 1**, Chheda teaches a method of controlling reverse/forward link transmission power in a mobile system (title), where a mobile terminal generates a power control command based on a received frame [Note: forward power control is disclosed, C1, L55-65], said received frame including a plurality of slots, each of said plurality of slots including power control bits and non-power control bits (C4, L5-19 and L53-67 to C5, L1-14 discloses measuring all bits within a frame, hence PCB and non-PBC bits are included) the method comprising:

Providing a first ratio of an energy of the non-power control bits to an energy of the power control bits (C1, L66-67 thru C4, L33 teaches  $E_b/N_0$  as a measure of energy-to-noise which reads on the applicant's claim. Note that other measurements are possible including SNR, SIR,  $E_b/N_t$ , etc. which are known in the art).

Generating a power control command based on the ratio (C2, L52-57 and/or C3, L9-15. Note that forward power control works in a similar manner as is disclosed by Chheda above).

As per **claim 5**, Chheda teaches forward power control capable of discontinuous transmission mode, where a terminal generate power control commands comprising;

First step of determining energy of PCB's is more than a first threshold value, first threshold is minimum value for receiving data, Second step of determining that a channel state is good if the first step determines energy of PCB's is more that first threshold value, Third step of determining that the channel state is bad if the first step determines that the energy of the PCB's is less than the first threshold (C2, L13-25, teaches sustaining a certain FER and GOS. Providing less translates into dropping

Art Unit: 2683

calls. The examiner interprets this as reading on the claim since FER/GOS involve determining if a channel is "good" and continually monitoring for fading/deterioration which then involves handoff. The examiner takes Official Notice that thresholds/reference levels AND the need for a minimum transmit power in order for RF communications to occur are known in the art. Note that Chheeda [C2, L35-42] teaches "target Eb/No" which is a predetermined threshold/reference).

As per ~~claim 22~~ **(claim 7)**, Chhedda teaches forward/reverse power control (title) according to a power control command included in data while in discontinuous transmission mode comprising [Note: forward power control is disclosed, C1, L55-65],:

A power control command demodulator for extracting power control command from the received data (figure 1 shows prior art with power command generator #120 which inherently requires a command demodulator to extract data)

A controller for combining demodulated information and information whether a previous frame has been transmitted (C5, L21-37 teaches multiple CRC's being kept track of, hence a controller would know if a previous frame was transmitted), for generating and outputting PCB's for power decrease only when the two information coincide (C2, L42-51 for power increase/decrease)

A forward transmitter for transmitting data and PCB's under control of controller (Chhedda teaches reverse link power control for wireless/cellular systems (C1, L10-65) which inherently require transmitters in the phone and base stations).

As per ~~claim 22~~ **(claim 7)**, Chhedda teaches claim 22 wherein if the power control command comprises one bit representing two states of sufficient or insufficient, the PCB's for performing power decrease/increase represent sufficient/insufficient (C2, L42-51 teaches power increase/decrease which is sent as a power control bit(s)).

#### ***Allowable Subject Matter***

1. Claims 4, 8-22 and 25 allowed.
2. Claims 2-3 and 6 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. They recite highly specific designs not found in the prior art of record, either alone or in combination.

**Conclusion**

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 571-272-7862. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stephen D'Agosta  
Primary Examiner

